

Remarks

Claims 1, 3, 4 and 11 are rejected as anticipated by Kazmer. The Examiner states that Kazmer (Fig. 2) teaches a pin having a pressure surface exposed to pressurized fluid in a closed position. The fluent plastic shown in Kazmer is not “pressurized fluid,” as defined in Applicant’s disclosure; however, to emphasize the distinction Applicant has amended claim 1 to recite “pressurized gas” instead of “pressurized fluid.” Kazmer does not teach a pressurized gas and the rejections are therefore overcome.

Claims 1, 3 and 4 are rejected as unpatentable over Hunter et al. in view of Sugiyama. Claim 1 requires: “said pin having an enlarged distal portion substantially blocking said passage when said pin is in its retracted position.” (Emphasis Added). Hunter does not teach such a limitation. At Column 8, line 51 of the Hunter specification this distinction is described:

While the openings defined by receptacle 125 and head 140 remain unobstructed, the gases flow relatively free from mold cavity 166...the dimensions of the openings defined by receptacle 125 and head 140 are selected such that the expanding foamable polymeric composition will not enter these openings until the pressure differential across the vent device 100 is sufficient to exceed the viscoelastic strength of the mixture”. (Emphasis Added).

Hunter goes on to describe the “foam tails 171” formed during molding between head 140 and receptacle 125 at Column 9, lines 3-4. Thus, rather than teaching a design wherein the “pin” blocks the opening, Hunter teaches a design specifically calculated to allow intrusion of molded material. One of the shortcomings of known designs for gas injection and evacuation is intrusion of resin into the gas inlet, Applicant’s Background of the Invention section, beginning page 2 of Applicant’s specification, is directed largely

to discussing this problem, and it is through implementation of the present design that the problem has been overcome. Hunter is directed specifically to a design wherein the head does not block the outlet, and the reference teaches away from any modification wherein the head prevents material flow.

The Examiner cites Sugiyama to illustrate a pressurized fluid supply. Sugiyama teaches a design in which the pin is retracted to open the passageway for introduction of a fluid. (Sugiyama Abstract). As amended, claim 1 requires: “a pin extending through said passage and reciprocal between an extended position at which said pin extends past said distal end.” At Column 2, lines 31 to 33, Sugiyama states: “The most important feature of this invention resides in a pin which advances forward into and retracts rearward out of the fluid inlet to close and open it.” Sugiyama thus does not teach an extended position of the pin, at which the pin “extends past the distal end” as required by claim 1. In fact, Sugiyama teaches just the opposite. Hunter and Sugiyama do not, alone or in combination, teach or suggest a pin sealing the gas inlet, and extending past the inlet to allow introduction of the gas. The references therefore cannot support a prima facie case of obviousness and the rejections are therefore overcome.


Claims 7-10 are rejected as unpatentable over Kazmer in view of Sugiyama. As presently amended, claim 7 requires: “said pin urged from said retracted position into said molding chamber when pressurized gas is supplied to said enlarged distal portion.” (Emphasis Added). Kazmer does not teach or suggest actuating the valve 43, 45 with pressurized gas. Sugiyama does not teach or suggest urging a valve member into the molding chamber with pressurized gas.

These distinctions were further explained with regard to the rejections of claim 1, above, and reference is made specifically thereto, Sugiyama teaches away from such a design. The references do not teach or suggest all the limitations of claim 7, and the claims dependent thereto, and the rejections are therefore overcome.

WHEREFORE, all the claims submitted are believed in condition for allowance, which is respectfully solicited. If the Applicant may be of further assistance in the prosecution of this application in any way, the Examiner is invited to contact the undersigned at (248) 364-2100.

Respectfully submitted,

DINNIN & DUNN, P.C.

By: 
Robert A. Dunn (Reg. No. 30,556)
2701 Cambridge Court, Ste. 500
Auburn Hills, MI 48326
(248) 364-2100

Attorney for Applicant

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